

REMARKS

Reconsideration of this patent application is respectfully requested in view of the foregoing amendments and the following remarks.

The Examiner has rejected claims 35, 37, 40 and 51 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,893,964 to *Claveau* in view of U.S. Patent No. 4,314,814 to *Deroode*.

Claims 35-52 have been canceled without prejudice. New claims 53-60 have been added. New independent claim 53 is directed towards a process that extends from former claims 35 and 43 while new claim 60 is directed towards a related apparatus disclosed in former claim 51 now canceled. These claims however also disclose additional steps or elements which are outlined below.

The applicant believes that new claims 53-60 are patentable over the above cited references, in particular *Claveau* and *Deroode* because the process of claim 53 and the associated apparatus of claim 60 are entirely different from both *Claveau* and *Deroode* and the applicant believes that even the combination of *Claveau* and *Deroode* would not teach the process according to

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claim 53 or the apparatus according to new claim 60.

Claveau differs from the process of claim 53 and the apparatus of claim 60 for the following reasons: 1) Claveau requires an additional envelope to enclose and press down on inkers; 2) Consequently, Claveau does not disclose that these inkers are capable of performing the process of the transfer material of claim 53 and does not disclose that these inkers are formed similar to the transfer support of claim 60; 3) the apparatus of Claveau and the process for applying inks using the design of Claveau is consequently much more complicated than with the present invention of the process of claim 53 or the apparatus of claim 60.

For example, Claveau discloses a process and a system for transferring artwork or decoration via inkers 3' having decorations 31 that are pressed on via separate superimposed membranes 8a and 8b.

In contrast claim 53 states the following:

providing an envelope formed from a transfer support which is adapted to receive the artefact... wherein said step of providing said envelope comprises forming said envelope from said transfer support so that said open end is defined by edge portions of said transfer support;

Thus, because the process of claim 53 results in the providing of an envelope from the transfer support, claim 53 and associated claim 60 differs from Claveau.

Furthermore, Claveau does not disclose that the inkers 3', that contain decorations 31, are capable of performing the functions of the transfer support of claim 53 such as transferring ink or decorations to an artefact. Instead, claim 53 states:

sucking air from an open end of said envelope to cause said transfer support to adhere to both sides of said artefact wherein said transfer support is made from a gas-tight thermoformable material

The applicant believes that this step signifies the difference between the present invention in claim 53 and Claveau in that because the transfer support can be used to transfer the artwork without an additional envelope, the process is much simpler with the present invention.

For example, with Claveau, the separate structure of the inkers 3' having decorations 31 and the membranes 8a and 8b create a more complex and inefficient structure and therefore process than that of claim 53 which involves only one transfer

support having a decoration, wherein the design of *Claveau* could result in displacements occurring between the membranes 8a and 8b and the inkers 3' which result in a reduced accuracy in the application of the decoration to the artefact and a decrease in the application quality.

*Deroode* differs from the process of claim 53 and the apparatus of claim 60 for the following reasons: 1) *Deroode* discloses a process that involves additional complex machinery; 2) *Deroode* also discloses that the object for decoration must be placed on this machinery; 3) *Deroode* blocks or seals the ends of the transfer support; and 4) the artefact is only coated on one side.

For example, *Deroode* discloses a process that involves a flexible support skin 15 that is blocked between complicated machinery involving a frame 27 and a counter frame 26 which is positioned to form a vacuum in chamber 20.

In contrast, the process according to claim 53 discloses the following step:

sucking air from an open end of said envelope to cause said transfer support to adhere to both sides of said artefact wherein said transfer support is made from a gas tight thermoformable material

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Thus, according to the step above the transfer support of claim 53 forms its own vacuum wrapping around the artefact while the process of *Deroode* involves complicated external machinery to apply the artwork.

In addition as stated above, the object to be decorated, for example, spectacles or glasses must be placed on a movable support 30 which is movable into a position for application by flexible support skin 15. In contrast, the envelope or artefact of claims 53 and 60 does not need to be moved on a movable support. Thus, because the flexible support skin 15 must be blocked between frame 27 and counter frame 26, and the object to be decorated must be moved on a movable plate 31 to contact support skin 15 to form a sealed vacuum chest 20 which is sealed by frame 27 clamping down on counter frame 26 to close slit 28 and form a sealed vacuum chamber, the apparatus and process of *Deroode* is much more complicated than the process of claim 53 or the apparatus of claim 60 which only requires that the transfer support be formed as an envelope.

For example, the process as in claim 53 states:

and wherein during said sucking step, said envelope is so arranged as to retain flexibility along its periphery, thereby

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allowing said pressure to be applied to said pattern directly by said transfer support.

Thus, because the envelope retains its flexibility in its peripheral edge, it does not need to be blocked by the frame 27 and counter frame 26 of *Deroode*. Thus, the process of claim 53 and the design of claim 60 do not need the complicated additional machinery of *Deroode*.

Finally, despite the complicated nature of *Deroode*, it does not let the artefact be decorated on both sides while the present invention as claimed in claims 53 and 60 is directed towards a process and an apparatus for coating the artefact on both sides.

In addition, the applicant believes that it would be improper to combine the disclosures of *Claveau* and *Deroode* together because as stated in *In Re Fine*, 837, F.2d 1071, 1074, 5 U.S.P.Q. 2d. 1596, 1598 (Fed Cir. 1988) there must be "some objective teaching in the prior art that would lead the individual to combine the relevant teachings of the references." The applicant believes that the references to *Claveau* and *Deroode* with relation to claims 53 and 60, actually teach away from each other.

First, these two documents do not relate to the same

sublimation technology. *Claveau* relates to the decoration of articles on the entire surface by means of elastic membranes pressing on the transfer support while *Deroode* relates to the partial decoration of an object by pressing against only one side of the object. The heating processes of *Deroode* and *Claveau* differ as well. For example, with *Claveau*, the heating step occurs after the vacuum is formed via the envelope and the inker. With *Deroode*, the sheet or transfer support is heated first, and then the object to be decorated is pressed against the heated transfer support. Another difference between these two references is that *Claveau* teaches a system and a process which is performed using a portable device such as an envelope or an elastic membrane 6 which is entirely different than the design of *Deroode* which includes a rigid vacuum chamber 20.

The one common element between *Claveau* and *Deroode* is that both use external elements to apply pressure onto a transfer support to decorate an object. However, this feature is certainly one element that the present invention in claims 53 and 60 differ from *Claveau* and *Deroode*. *Claveau* applies pressure using an external envelope which applies pressure on a transfer support or an inker while *Deroode* uses a frame 27, a counter frame 26, a vacuum chest 20 and a bracket 30 all working together so that a flexible support skin can be used to apply a decoration

to the artefact.

With the present invention as claimed in claim 53 and 60, the transfer support itself is shaped as an envelope which is made from an air-tight thermo-formable material and doesn't need any additional support for applying a decorative ink to the artefact. Thus, with the present invention the transfer of material is much less expensive than with *Claveau* because it does not involve using an external more expensive envelope or membrane or using an external complicated and possibly more expensive machinery to apply the ink or decoration. Thus, the present invention not only differs, it provides a less expensive more simple solution than that of the prior art.

Thus, the applicant believes that the differences between the present invention as described in independent claim 53 and 60 and *Deroode* and *Claveau* would mean that independent claims 53 and 60 are patentable over the above cited references and therefore *Deroode* and *Claveau* should not be combined to render claims 53 and 60 unpatentable.

One final reason for patentability of claims 53-60 involves the material used for the transfer support in both claims 53 and 60. The present invention as in claims 53 and 60 involves:



"sucking air from an open end of said envelope to cause said transfer support to adhere to said artefact wherein said transfer support is made from a gas tight thermoformable material;"

New claim 53 differs from previous claims 35 and 51 in that with claim 53, the transfer support is a gas tight thermoformable material.

The inker 3" of *Claveau* does not disclose that it is gas tight and furthermore it does not disclose that it is thermoformable. In addition, the envelope that surrounds the inker of *Claveau* also does not disclose that it is thermoformable. In fact, *Claveau* teaches away from this feature in that in column 4, lines 18-21, it states that:

"pouch 8 is constituted by two air tight superimposed membranes 8a, 8b deformable under depression and resistant to temperatures fluctuating between 180° and 200°."

*Deroode* teaches that the support skin is heated for sublimation of the inks onto the artefact but it does not teach the use of a thermoformable material that can be used to apply the artwork. Instead *Deroode* describes the support skin as being able to withstand temperatures of 120° to 140° for sublimation of the pigments and even withstand temperatures up to 200°C. This description in column 5, lines 11-16 does not mention any

thermoforming and in fact, by instructing that the support skin can withstand these temperatures appears to teach away from the use of a gas tight thermoformable material.

The Examiner has cited U.S. Patent No. 4,923,847 to Ito as using a thermoformable material. However, Ito is directed towards applying inks or artwork to paper.

Ito describes a process that is for printing on paper and would not be suitable for printing or forming images on other types of surfaces or layers such as on artefacts. Thus, the process according to Ito does not describe using an envelope formed from a transfer support comprising a gas tight thermoformable material as described in new claim 53, because this type step would be unnecessary when coating a simple piece of paper.

In addition, new claim 53 is directed towards:

"A process for treating artefacts comprising the following steps in sequence"

as described in the preamble of claim 1.

Ito does not describe this process for coating artefacts and is not in any way related to this process. Instead, Ito is

directed toward a process and a heat transfer sheet for laminating with heat transferrable paper to produce an image.

Therefore, the applicant believes that it would be improper to combine the references of *Claveau*, *Deroode* and *Ito* and that the process according to claim 53 its dependent claims 54-59 and independent claim 60 are patentable over the above cited references taken either singly or in combination.

The applicant respectfully requests early allowance of the remaining claims.

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